

QUERY CONTROL FORM		RTIS USE ONLY	
Application No. <u>09 498554</u>	Prepared by <u>ewc</u>	Tracking Number <u>05943812</u>	
Examiner-GAU <u>Ludlow</u>	Date <u>8/19/04</u>	Week Date <u>5-03-04</u>	
<u>1743</u>	No. of queries <u>- 1 -</u>	<u>IFW</u>	

## JACKET

a. Serial No.	f. Foreign Priority	k. Print Claim(s)	p. PTO-1449
b. Applicant(s)	g. Disclaimer	l. Print Fig.	q. PTOL-85b
c. Continuing Data	h. Microfiche Appendix	m. Searched Column	r. Abstract
d. PCT	i. Title	n. PTO-270/328	s. Sheets/Figs
e. Domestic Priority	j. Claims Allowed	o. PTO-892	t. Other

## SPECIFICATION

- a. Page Missing
- b. Text Continuity
- c. Holes through Data
- d. Other Missing Text
- e. Illegible Text
- f. Duplicate Text
- g. Brief Description
- h. Sequence Listing
- i. Appendix
- j. Amendments
- k. Other

## MESSAGE

There are color drawings for this file but the required paragraph is not printed at the beginning of the descriptions.

Please advise

Thank you

ewc

RECEIVED

AUG 24 2004

FLOWERING DIVISION

13

## CLAIMS

- a. Claim(s) Missing
- b. Improper Dependency
- c. Duplicate Numbers
- d. Incorrect Numbering
- e. Index Disagrees
- f. Punctuation
- g. Amendments
- h. Bracketing
- i. Missing Text
- j. Duplicate Text
- k. Other

initials

## RESPONSE

Correction to previous XRUSH - This file does not contain color drawings - The paragraph previously inserted is removed.

initials

KFT

subsequently washed and prepared for reaction with a new set of monomers. Dimers, trimers, and larger polymers of controlled length and monomer sequence are prepared by repeating the above steps with different groupings of the reaction regions and monomer solutions.

- 5 In alternative embodiments, the polymers or other compounds of the array are delivered to the regions as complete species, and thus the above polymer synthesis steps are unnecessary.

- 10 In a preferred embodiment, a plurality of reaction regions on the substrate surface are surrounded by a confining region such as a non-wetting region which hinders the transport of reactants between adjacent reaction regions. Thus, the reactants in one region cannot flow to other regions where they could contaminate the reaction. In certain preferred embodiments, the regions of the array are defined by selective irradiation of a substrate surface
- 15 containing photolabile hydrophobic protecting groups. In areas where the surface is irradiated, the hydrophobic protecting groups are removed to define reaction regions. When an aqueous or other polar reactant solution is deposited in the reaction region, it will have a relatively large wetting angle with the substrate surface so that by
- 20 adjusting the amount deposited, one can ensure no flow to adjacent regions.

A further understanding of the nature and advantages of the invention herein may be realized by reference to the remaining portions of the specification and the attached drawings.

#### BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a generalized diagram illustrating the invention;

- 30 Fig. 2 is a flow chart illustrating the treatment steps performed in synthesizing an array of various polymers;

Fig. 3 is a mapping of a resulting array of polymers;

Fig. 4a to 4e illustrate the arrangement of three channel block templates in six process steps employed to synthesize 64 million hexapeptides from a 20 amino acid basis set;

- 35 Fig. 5a is a top view and Fig. 5b is a cross-sectional view of a first embodiment of a device used to synthesize arrays of polymer sequences;

- Fig. 6 is a cross-sectional view of an embodiment containing a precursor channel for holding a substrate against a channel block;
- 40

Figs. 7a and 7b are top views of two of two different "funnel array" channel blocks;

Fig. 8 is a cross-sectional view of a channel block and associated flow parts according to one embodiment of the invention.

Please see copy attached

## DRAWINGS

09498554

--continued--

Make correction yourself if:

- A granted petition to accept color drawings exists, but the required color drawings paragraph is missing. Immediately preceding the brief description of the drawings section of the specification, enter the following paragraph:

*sent*  
*Do not insert text*

---

The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.

---

- No print figure has been specified on face of file. Enter "1" in "Print Fig." box. If figure 1 is labeled "prior art," enter the number of the next consecutive figure that is not labeled "prior art." If the print figure is connected to another figure, include the connected figure.
- A discrepancy between the formal drawings and the specification's brief description of them is due to a typographical error occurring in a description of a range of figures. Verify that drawing information (figure labels, including partial views) is correct by comparing formal drawings with drawings as originally filed. If you are sure that formal drawings are correct, amend specification to agree. See the example below in which, due to a typographical error, the specification describes figures 12A—12B, while both the formal drawings and the drawings as originally filed show figures 12A—12C.